

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1. (currently amended) A piezoceramic composition with the general molecular formula $Pb_{1-a}RE_bZr_xTi_yTR_zO_3$, where a, x and y are each greater than 0, b is a rare earth metal proportion and z is a transition metal proportion, in which

- RE is at least one rare earth metal selected from the group consisting of europium, gadolinium, lanthanum, neodymium, praseodymium, promethium and samarium with $[[a]]$ the rare earth metal proportion b,

- TR is at least one transition metal selected from the group consisting of chromium, iron and manganese with a transition metal valency W_{TR} and $[[a]]$ the transition metal proportion z and

- a following relationship applies: $z > b/(4 - W_{TR})$.

2. (currently amended) The piezoceramic composition in accordance with claim 1, wherein the rare earth metal proportion b is selected from a range of 0.2 mol% to 3 mol%.

3. (currently amended) The piezoceramic composition in accordance with claim 1, wherein a sum of the rare earth metal

proportion and of the transition metal proportion z is less than 6 mol%.

4. (previously presented) The piezoceramic composition in accordance with claim 1, wherein the RE is a single rare earth metal and TR is selected from at most two transition metals or TR is a single transition metal and RE is selected from at most two rare earth metals.

5. (previously presented) The piezoceramic composition in accordance with claim 1, wherein a value for a mechanical quality factor Q_m is selected from a range of 50 up to and including 1800.

6. (previously presented) The piezoceramic composition in accordance with claim 1, wherein the composition has a Curie-temperature T_c lying above 280°C.

7. (currently amended) A method for producing a piezoceramic composition in accordance with claim 1, comprising:

growing the composition at a specific sinter temperature in which a maximum particle growth of the piezoceramic composition is determined.

8. (previously presented) The method in accordance with claim 7, wherein the following steps are performed:

defining the rare earth metal proportion b,

defining the transition metal proportion z ,
sintering the piezoceramic composition at the sinter
temperature, and
determining a particle size of the sintered
piezoceramic composition.

9. (previously presented) The method in accordance
with claim 7, wherein the transition metal iron has an iron
proportion z_{Fe} and the transition metal manganese ~~with~~ has a
manganese proportion Z_{Mn} , so that the relationship to $z_{Fe} + 2 \cdot Z_{Mn}$,
 $> b$ is produced and with the variation of the manganese
proportion Z_{Mn} , a dissipation factor $\tan \delta$ of the composition and
with a variation of the iron proportion z_{Fe} , setting a maximum
value particle growth of the composition.

10. (currently amended) ~~[[The]]~~ A piezoceramic body
with a piezoceramic composition in accordance with claim 1.

11. (previously presented) The piezoceramic body in
accordance with claim 10, wherein a metallization is selected
from at least one of the group consisting of silver, copper and
palladium.

12. (previously presented) The piezoceramic body in
accordance with claim 11, wherein a proportion of palladium is
selected ranging from 0% up to and including 30%.

13. (previously presented) The piezoceramic body in accordance with claim 12, wherein the proportion of palladium amounts to a maximum of 5%.

14. (previously presented) The piezoceramic body in accordance with claim 10, wherein a monolithic multilayer construction in which piezoceramic layers with the piezoceramic composition and electrode layers with the metallization are arranged alternating above one another.

15. (previously presented) The piezoceramic body in accordance with claim 10, which is a component selected from the group consisting of an actuator, a bending converter, a motor and a transformer.

16. (previously presented) A method for producing a piezoceramic body, comprising:

providing a green body with a piezoceramic composition in accordance with claim 1; and

sintering the green body to the piezoceramic body.

17. (previously presented) The method in accordance with claim 16, wherein the green body is provided with a metallization which is at least one selected from the group consisting of silver, copper and palladium.

18. (previously presented) The method in accordance with claim 16, wherein the sintering is undertaken in an oxidizing or reducing sinter atmosphere.

19. (previously presented) The method in accordance with claim 16, wherein a sinter temperature ranging from 900°C to 1100°C inclusive is selected for sintering.

20. (previously presented) The method in accordance with claim 16, wherein the green body with a plurality of particle growth seeds is used with the piezoceramic composition.